Differential Sets

The root knot nematode (*Meloidogyne*) host differential test table differs from other differential set tables: the different species of *Meloidogyne* are identified rather than different varieties of the crop.

The currently identified resistant genes to Meloidoygne do not always confer resistance to all species, illustrating the importance of being able to identify the correct species of nematode affecting a plant. The North Carolina differential host test is used to assist in identifying one of the four common species of *Meloidogyne* species. When more than one species occurs in a population the use morphological characters such as perineal patterns is recommended as these patterns differ among the four species and assist in the diagnosis. Published PCR protocols that identify *Meloidogyne* species are also available.

Differential sets for *Meloidogyne* sp.

Meloidogyne sp	Differential Hosts [a]					
	Cotton	Tobacco	Pepper	Watermelon	Peanut	Tomato
M. incognita						
Race 1	-	-	+	+	-	+
Race 2	-	+	+	+	-	+
Race 3	+	-	+	+	-	+
Race 4	+	+	+	+	-	+
M. arenaria						
Race 1	-	+	+	+	+	+
Race 2	-	+	-	+	-	+
M. javanica	+	+	-	+	-	+
M. hapla	-	+	+	-	+	+

NOTE: (-) indicates a resistant host; (+) indicates a susceptible host

[a] **Cotton -** Deltapine 61; **Tobacco -** NC 95; **Pepper -** Early California Wonder; **Watermelon -** Charleston Gray; **Peanut** - Florunner; **Tomato** – Rutgers

Source: Barker, K R, C C Carter and J N Sasser (1985). Volume II Methodology of An Advanced Treatise on *Meloidogyne*. North Carolina State University Graphics

For more information contact the ISF Secretariat at isf@worldseed.org

NOTE: ISF has done its best to provide information that is up-to-date and published in refereed journals, and therefore accepts no liability for the use of this information.